



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,957	03/31/2004	R. Scott Stephens	WEYE122661/25487	5876
28624	7590	07/19/2006	EXAMINER	
WEYERHAEUSER COMPANY INTELLECTUAL PROPERTY DEPT., CH 1J27 P.O. BOX 9777 FEDERAL WAY, WA 98063			CORDRAY, DENNIS R	
		ART UNIT	PAPER NUMBER	
			1731	

DATE MAILED: 07/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

P

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/813,957	STEPHENS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dennis Cordray	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 06 April 2006.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-19 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

## DETAILED ACTION

### ***Response to Amendment***

The Affidavit filed on 10 March, 2006 under 37 CFR 1.131 is sufficient to overcome the Neogi reference.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 3, 4, 6-8 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al (5562740) in view of Casey (Pulp and Paper Chemistry and Chemical Technology, 3<sup>rd</sup> ed, vol III, John Wiley & sons, 1981) and Biermann (Essentials of Pulping and Papermaking, Academic Press, Inc., 1993), and further in view of Sprang et al (5571604).

Cook et al discloses crosslinked cellulosic fibers and a process for making the fibers comprising: applying a citric acid crosslinking agent and a crosslinking catalyst to a web of fibers, separating the web into individualized fibers, heating the individualized fibers to provide individualized crosslinked fibers, and bleaching the crosslinked fibers using hydrogen peroxide and sodium hydroxide. (abstract; col 13, lines 22-25). Cook also discloses the use of sodium hypophosphite as a crosslinking catalyst (col 12, lines

28-30). Cook further discloses that the fibers can be used to form absorbent products such as diapers, feminine care products, and tissues (col 17, lines 30-35).

Cook does not disclose the use of a whitening agent.

Casey et al teaches that paper can be whitened by adding a blue dye because the dye is complementary to the natural yellow tint of pulp (p 1833, last par bridging to p 1834). Although the addition of a dye reduces total reflectance, Casey teaches that yellowness is about four times as important to the visual perception of whiteness than total reflectance (p 1835, 2<sup>nd</sup> full par), thus a reduction of yellowness and an increase in whiteness is achieved by adding a blue dye. Casey also teaches that the average person prefers a blue-white to a yellowish white (p 1835, next to last par).

Biermann teaches that blue dye is often added to pulp to offset the tendency for pulp to be yellow (p 197, left col, 2<sup>nd</sup> par), thus the use of a whitening agent to whiten pulp is well known.

Sprang et al discloses an absorbent fibrous nonwoven structure comprising cellulosic fibers (Abs; col 6, lines 29-30). Sprang et al teaches that chemical additives, such as pigments, dyes or crosslinking agents, can be added to a fibrous web (col 7, lines 31-44). Sprang et al also teaches addition of crosslinking agents to the pulp, thus dyed and crosslinked fibers are known in prior art (col 6, lines 51-52).

Azo dyes are the largest class of organic dyes and are widely used in the textile and paper industries, thus are well known in the art. (for evidence, see Chudgar et al, R.J. "Dyes, Azo" Kirk-Othmer Encyclopedia of Chemical Technology, John Wiley & Sons, 2003, Introduction).

The art of Cook et al, Casey, Biermann, Sprang et al and the instant invention are analogous in that they are from the art of dyeing and bleaching cellulosic fibers. It would have been obvious at the time the invention was made to a person with ordinary skill in the art to add a blue azo dye to the formed web to increase whiteness of the fibrous product in the process of Cook et al in view of Casey and Biermann and further in view of Sprang et al to make the product more preferable to customers.

3. Claims 2, 9-11 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al, Casey, Biermann, Sprang et al, as applied to claims 1, 3, 4 and 6-8 and 17-19 above, and further in view of von Raven (5482514).

Cook et al, Casey, Biermann and Sprang et al do not disclose that fibers treated with a whitening agent and a bleaching agent are whiter than fibers not so treated. Cook et al, Casey, Biermann and Sprang et al also do not teach that bleaching is done after a dye is added.

Von Raven shows that paper making fibers treated with both a whitening agent and a bleaching agent are whiter than those that are not bleached (col 4, lines 58-60). Von Raven also claims that bleaching can be done before, during or after dyeing in the process (claim 15).

The art of Cook et al, Casey, Biermann, Sprang et al, von Raven et al and the instant invention are analogous as they pertain to the treatment of fibers.

It would have been obvious at the time the invention was made to a person with ordinary skill in the art to add a blue azo dye as a functionally equivalent option to the formed web and to bleach the crosslinked fibers to increase whiteness of the fibrous

Art Unit: 1731

product in the process of Cook et al in view of Casey, Biermann and Sprang et al and further in view of von Raven et al to make the product more preferable to customers.

4. Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al in view of Casey, Biermann, Sprang et al and von Raven as applied to claims 1-4 and 6-11 above, and further in view of von der Eltz et al (5512064).

Cook et al, Casey, Biermann, Sprang et al and von Raven do not disclose the use of an azo metal complex dye as a blue dye.

Von der Eltz et al teach that azo dyes and azo metal complex dyes are well known art and are completely familiar to one skilled in the art (col 5, lines 10-19).

The art of Cook et al, Casey, Biermann, Sprang et al, von Raven et al, Von der Eltz et al and the instant invention are analogous ad pertaining to dyed cellulosic fibers. In the absence of limiting parameters not revealed in the current disclosure it would have been obvious at the time the invention was made to a person with ordinary skill in the art to add a blue azo metal complex dye as a functionally equivalent option to the formed web to increase whiteness of the fibrous product in the process of Cook et al in view of Casey, Biermann, Sprang et al and von Raven, and further in view of von der Eltz et al to make the product more preferable to customers.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 3-6, 9-14 and 17-19 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of copending Application No. 10/815159 in view of Farr et al ("Bleaching Agents" Kirk-Othmer Encyclopedia of Chemical Technology, John Wiley & Sons, 2003) and further in view of von Raven.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the referenced claims of the instant invention are fully encompassed by the claims of the copending application.

- Claim 1 of the copending application is a product by process claim and thus emphasizes the product, whitened crosslinked cellulosic fibers, which become the fibers claimed in the instant invention with the application of a bleaching agent. The language of Claim 1 of the copending application (i.e.-comprising) does not preclude the use of a bleaching agent. Farr et al teaches that bleaching lightens or whitens a substrate through chemical reaction and that paper and pulp bleaching is a known process. It would have been obvious to one with ordinary skill in the art to modify Claim 1 of the copending application to include bleaching the claimed fibers of 10/815159 to improve the whiteness of the product as per the teachings of Farr et al.

Art Unit: 1731

- Claims 3-6 of the instant invention read the same as claims 2-5 of the copending application after appropriate changes in the referenced claim numbers.
- The language of Claim 6 of the copending application does not preclude the use of a bleaching agent as specified in Claim 9 of the instant invention and, other than the additional step in Claim 9 of applying a bleaching agent, the claims read identically. Neogi et al discloses that bleaching is a common method for increasing whiteness and that a whiter product is preferable to customers. Von Raven discloses that bleaching can occur after crosslinking of a fibrous material. It would have been obvious to one with ordinary skill in the art to modify Claim 6 of the copending application to include a bleaching step after crosslinking as per the teachings of Farr et al and von Raven.
- Claims 10-14 of the instant application read the same as Claims 7-11 of the copending application after appropriate changes in the referenced claim numbers.
- Claims 17-19 of the instant application read the same as Claims 12-14 of the copending application after appropriate changes in the referenced claim numbers.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Response to Arguments***

In response to the Affidavit filed on 10 March, 2006 under 37 CFR 1.131, the rejections based on the Neogi reference are withdrawn. However, upon further consideration, a new ground(s) of rejection is made as detailed above.

Applicants' arguments filed 6 April, 2006 have been fully considered but they are not persuasive. The reasons are as follows:

Applicants argue that Neogi teaches that addition of blue dye to fluff pulp to improve whiteness is not well known, thus the addition of blue dye to pulp to offset yellowness would not be obvious to one skilled in the art. As detailed in the above rejections, Biermann teaches that blue dye is often added to pulp to offset the tendency for pulp to be yellow (p 197, left col, 2<sup>nd</sup> par), thus the use of a blue dye to whiten pulp is well known. The use of blue dye to increase whiteness is also known in other papermaking processes, as admitted by Applicant on p 2 in quoting Neogi and also in the instant Specification on p 3, lines 17-18, "The addition of small amounts of blue colorant to improve whiteness appearance is known in other fields, such as papermaking." As also noted above, Casey teaches that the average person prefers a blue-white to a yellowish white (p 1835, next to last par), thus providing motivation to use the blue dye. There is ample evidence and motivation in the prior art that would suggest to one of ordinary skill in the art that addition of blue dye to cellulosic fibers, whether in pulp or sheet form, would increase their whiteness and make them more preferable to consumers and that such a process could be done with a reasonable expectation of success. As also detailed above, combining dyes with crosslinking agents is well known as is post crosslink bleaching to further improve whiteness.

Also note that Claim 1 does not recite "fluff pulp" or any other kind of pulp, but uses the broader designation of "cellulosic fibers."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



DRC

  
STEVEN P. GRIFFIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700